

105 01441

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 July 2003 (24.07.2003)

PCT

(10) International Publication Number
WO 03/060892 A2

(51) International Patent Classification⁷: **G11B 7/135**

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(21) International Application Number: **PCT/IB03/00093**

(22) International Filing Date: 16 January 2003 (16.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

02075209.3	17 January 2002 (17.01.2002)	EP
02077992.2	22 July 2002 (22.07.2002)	EP

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

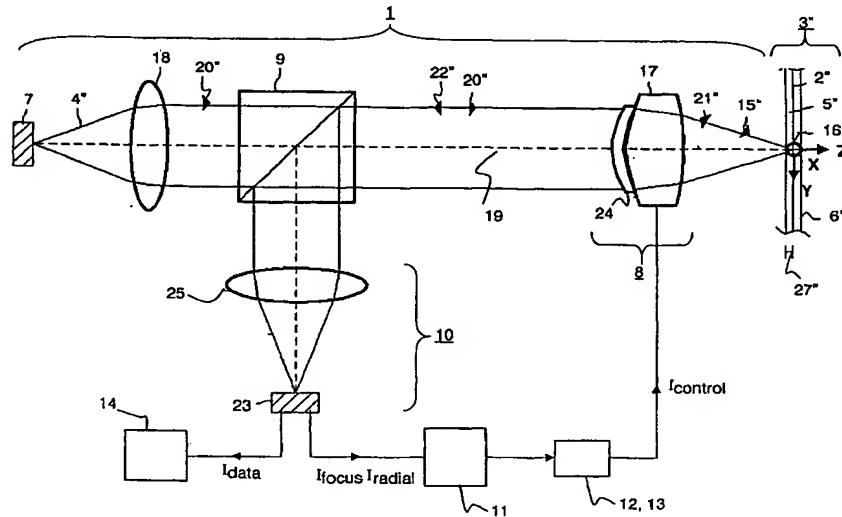
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: OPTICAL SCANNING DEVICE



WO 03/060892 A2

(57) Abstract: An optical device (1) for scanning three information layers (2, 2', 2'') by means of three radiation beams (4, 4', 4'') having three respective wavelengths ($\lambda_1, \lambda_2, \lambda_3$) and polarizations (p_1, p_2, p_3), wherein the three wavelengths substantially differ from each other. The device comprises a radiation source (7) for emitting the three radiation beams, an objective lens system (8) for converging the three radiation beams beam on the positions of the three respective information layers, and a phase structure (24) having a non-periodic stepped profile. Furthermore, the structure includes birefringent material sensitive to the three polarizations and the stepped profile is designed for introducing three wavefront modifications ($\Delta W_1, \Delta W_2, \Delta W_3$) for the three wavelengths, respectively, wherein one of the wavefront modifications is of a type different from the others and one of the polarizations differs from the others.